

CLAIMS:

1. An optical receptacle connectable with an optical plug having an optical transmission medium, said optical receptacle comprising a photoelectric conversion module having the capability of making photoelectric conversion between light signals transmitted through said optical transmission medium and electrical signals, and a module housing for accommodating said photoelectric conversion module therein,

wherein said module housing is formed with a tubular projection, into which one end of said optical transmission medium can be inserted, and

said photoelectric conversion module comprises an optical device disposed in a closely opposing relation to the one end of said optical transmission medium in said tubular projection when said optical plug is connected with said optical receptacle, and an electrical circuit electrically connected to said optical device.

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2. The optical receptacle as set forth in claim 1, wherein said optical device is at least one of a light emitting element and a light receiving element.

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3. The optical receptacle as set forth in claim 1, wherein said module housing has said tubular projection integrally formed on its front surface, a rear opening, through which said photoelectric conversion module is accommodated in said module housing, and a shield layer formed on its exterior surface.

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4. The optical receptacle as set forth in claim 1, wherein said module housing has a stopper formed in said tubular projection, against which the one end of said optical transmission medium abuts when said optical plug is connected with said

optical receptacle.

5 5. The optical receptacle as set forth in claim 1, further comprising a lens, which is positioned between said optical device and the one end of said optical transmission medium when said optical plug is connected with said optical receptacle.

10 6. The optical receptacle as set forth in claim 1, wherein said photoelectric conversion module comprises a module body having a post, on a top of which said optical device is mounted, and said electric circuit is mounted on said module body.

15 7. The optical receptacle as set forth in claim 6, wherein said post is formed in its top with a recess for mounting said optical device on a bottom of said recess, and a reflection layer for preventing a scattering of light is formed on a sidewall in said recess.

20 8. The optical receptacle as set forth in claim 1, further comprising a receptacle housing for accommodating said module housing therein, which is used for connection with said optical plug and has a front opening, through which said
25 optical plug can be inserted into a plug accommodation space defined in said receptacle housing.

9. The optical receptacle as set forth in claim 8, wherein said receptacle housing

has a rear opening, through which said photoelectric conversion module is accommodated in said receptacle housing such that said tubular projection of said module housing projects in said plug accommodation space, and said rear opening is closed by an electromagnetic interference shielding member.

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10. The optical receptacle as set forth in claim 6, wherein said photoelectric conversion module is a molded interconnect device that a wiring for making electrical connection between said optical device and said electrical circuit is
10 formed along an exterior surface of said module body.

11. The optical receptacle as set forth in claim 6, wherein said photoelectric conversion module has a lens formed on said optical device by molding a
15 translucent insulating resin at the top of said post, and an insulating protective layer obtained by coating said translucent insulating resin on a side wall of said post, at which a wiring pattern is formed to make an electrical connection between said optical device and said electrical circuit.

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12. An optical receptacle connectable with an optical plug having an optical transmission medium, said optical receptacle comprising a photoelectric conversion module having the capability of making photoelectric conversion between light signals transmitted through said optical transmission medium and
25 electrical signals, and a module housing for accommodating said photoelectric conversion module therein,

wherein said photoelectric conversion module comprises a module body having a post, an optical device mounted on a top of said post, and an electrical circuit mounted on said module body and electrically connected to said optical

device,

said module housing has a tubular projection, into which one end of said optical transmission medium can be inserted, and a partition wall is formed in said tubular projection,

5 said photoelectric conversion module is accommodated in said module housing such that said post is positioned at a side of said partition wall in said tubular projection, and

 wherein when said optical plug is connected with said optical receptacle, the one end of said optical transmission medium is positioned at the opposite side
10 of said partition wall in said tubular projection so as to be in a closely opposing relation to said optical device mounted on said post.

13. A photoelectric conversion module for an optical receptacle connectable with
15 an optical plug having an optical transmission medium, said photoelectric conversion module having the capability of making photoelectric conversion between light signals transmitted through said optical transmission medium and electrical signals, and comprising a module body having a post, an optical device mounted on a top of said post, and an electrical circuit mounted on said module
20 body and electrically connected to said optical device,

 wherein said photoelectric conversion module is a molded interconnect device that a wiring for making the electrical connection between said optical device and said electrical circuit is formed along an exterior surface of said module body, and

25 said optical device mounted on said post is disposed in a closely opposing relation to one end of said optical transmission medium when said optical plug is connected with said optical receptacle.